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EXAMINER

MANNING, JOHN

ART UNIT	PAPER NUMBER
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2614

DATE MAILED: 11/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/735,676	Applicant(s) BAHRAINI, ARDAVAN	
	Examiner John Manning	Art Unit 2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed August 25, 2005 have been fully considered but they are not persuasive.

Newton's Telecom Dictionary is relied upon for evidentiary support that it is well known in the art to use CRC for verification purposes. "Cyclic Redundancy Check. A process used to check the integrity of a block of data" (Page 179).

Applicant states "Claim 1 recites the steps of 'receiving a message designating whether to tune to an in-band or an out-of-band channel for receiving the code object; tuning to the designated channel; and receiving the code object from the designated channel.' (emphasis added)".

Applicant argues "Claim 1 is not obvious in light of Banker or Bacon because Banker appears to merely disclose a method and apparatus for tuning a data channel in an in-band subscription television system, and Bacon appears to merely disclose allowing a subscriber of a subscription television system to be reprogrammed through a download program code parameters transaction. Neither Banker nor Bacon, however, disclose or suggest 'receiving a message designating whether to tune to an in-band or an out-of-band channel for receiving the code object' as recited in Applicant's claim 1".

Claim 1 is written in the alternative, such that the claimed limitation may be met by either "receiving a message designating whether to tune to an in-band channel for receiving the code object" or "receiving a message designating whether to tune to an out-of-band channel for receiving the code object". (See Col 8, Lines 40-45 and Figure

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5B of Banker). Banker discloses receiving a message to tune to a channel. The channel is inherently either in-band or out-of-band.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Banker et al. (US Pat No 5,247,364) in view of Bacon et al. (US Pat No 5,440,632).

In regard to claim 1, Banker discloses a system for delivering a message to a set top box with "tune to" information for downloading data. The claimed steps of "receiving a message designating whether to tune to an in-band or an out-of band channel" and "tuning to the designated channel" are met by Figures 5B and 7A. "The message definition transaction transmission includes a background color field for setting the background color of the on-screen display and a tuning field which instructs the terminal which data channel to tune to receive the message, which in this example, is the message channel" (Col 8, Lines 20-25). Banker discloses receiving data from the designated channel. "This channel, known as the data carrier, is used to transmit both addressable commands intended for a particular out-of-band subscriber terminal and global commands intended for all out-of-band subscriber terminals in the system" (Col 2, Lines 58-63). Banker, however, fails to explicitly disclose that the data is a "software

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code object” as recited in the preamble as well as the claim and is silent with respect to software upgrades. Bacon teaches downloading data that is a software code object so as to upgrade the subscriber terminal. Both Banker and Bacon are directed towards distribution of data via in band or out of band channels to a set top box in a video distribution system environment. Bacon discloses the “boot program further contains a revision number so that the control microprocessor may be upgraded by replacement and matched with reprogrammed control program code if so desired” (Col 2, Lines 41-44). Consequently, it would have been obvious to one of ordinary skill in the art to extend the functionality of Banker with downloading data that is a software code object so as to upgrade the subscriber terminal.

In regard to claim 2, the message of Figure 5B meets the limitation of a download flag. The tuning data describes whether to tune to an in-band or out-of-band channel.

In regard to claim 3, the Bacon et al. reference discloses the use of a boot program to provide a loading routine for downloading new programming such as platform code. “The control microprocessor 128 contains the boot program in its internal ROM which, upon start up or reset, will initialize the subscriber terminal 40 and initiate the control program of the control microprocessor 128 from the correct starting address. The boot program also provides a loading routine for the downloading of new control code, either into the internal non-volatile memory of the subscriber terminal 40, such as Flash EPROM memory 134, the external memory on the expansion card 138, or both. The boot program comprises an initialization and loading program and several kernel routines” (Col 13, Lines 54-65).

In regard to claim 7, as stated in the MPEP § 2111.02 (please see also *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 – CCPA 1951), the preamble of the claim neither recites the limitations of the claim nor is the preamble necessary to give life, meaning, and vitality to the claim, therefore, the preamble is not served to further define the structure of the claim. Banker discloses a system for delivering a message to a set top box with “tune to” information for downloading data. The claimed step of “a download control message including a download tag and information related to a download channel frequency, the download flag capable of corresponding to one of an out-of-bound channel and an in-band channel” is met by Figures 5B and 7A. “The message definition transaction transmission includes a background color field for setting the background color of the on-screen display and a tuning field which instructs the terminal which data channel to tune to receive the message, which in this example, is the message channel” (Col 8, Lines 20-25). Where the message definition is a download flag. The claimed step of “boot-code for determining the value of the download-control flag, for tuning to the channel indicated in the download control message” is met by the microprocessor 410, which is inherently controlled by code. Banker discloses receiving data from the designated channel. “This channel, known as the data carrier, is used to transmit both addressable commands intended for a particular out-of-band subscriber terminal and global commands intended for all out-of-band subscriber terminals in the system” (Col 2, Lines 58-63). Banker, however, fails to explicitly disclose that the data is a software code object as recited. Bacon teaches downloading data that is a code object so as to upgrade the subscriber terminal. Both

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Banker and Bacon are directed towards distribution of data via in band or out of band channels to a set top box in a video distribution system environment. Bacon discloses the "boot program further contains a revision number so that the control microprocessor may be upgraded by replacement and matched with reprogrammed control program code if so desired" (Col 2, Lines 41-44). Consequently, it would have been obvious to one of ordinary skill in the art to modify Banker with downloading data that is a code object so as to upgrade the subscriber terminal.

4. Claims 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Banker et al. in view of Bacon et al. and further in view of Hendricks et al. (US Pat No 5,990,927).

In regard to claim 4, the Banker reference discloses a method of downloading data to a cable television converter or a set top box, using multiple channels. The reference fails to explicitly disclose the step of authorizing a digital access controller before or after the step of transmitting the out-of-band control signal. Hendricks et al. reference teaches the initialization or configuration, by the digital access controller or the network controller 214, of the set top box, which can take place either before or after the out-of-band transmission so as to give the end-user access to the provided services.

"As a network controller 214, the cable headend 208 performs the system control functions for the system. The primary function of the network controller 214 is to manage the configuration of the set top terminals 220 and process signals received from the set top terminals 220. In the preferred embodiment, the network controller 214 monitors, among other things, automatic poll-back responses from the set top terminals 220 remotely located at each subscribers' home. The polling and automatic report-back cycle occurs frequently enough to allow the network controller 224 to maintain accurate account and billing information as well as monitor authorized channel access. In the simplest embodiment, information to be sent to the network controller 224 will be stored in

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RAM within each subscriber's set top terminal 220 and will be retrieved only upon polling by the network controller 214. Retrieval may, for example, occur on a daily, weekly or monthly basis. The network controller 214 allows the system to maintain complete information on all programs watched using a particular set top terminal 220. The network controller 214 is also able to respond to the immediate needs of a set top terminal 220 by modifying a program control information signal received from the operations center 202. Therefore, the network controller 214 enables the delivery system to adapt to the specific requirements of individual set top terminals 220 when the requirements cannot be provided to the operations center 202 in advance. In other words, the network controller 224 is able to perform "on the fly programming" changes" (Col 9, Lines 30-65).

Consequently, it would have been clearly obvious to one of ordinary skill in the art to implement the aforementioned teaching with the initialization or configuration, by the digital access controller or the network controller 214, of the set top box, which can take place either before or after the out-of-band transmission so as to give the end-user access to the provided services.

5. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Banker et al. (US Pat No 5,247,364) in view of Bacon et al. (US Pat No 5,440,632) in further view of Hendricks et al. and further in view of Wagner et al. (US Pat No 5,761,602).

In regard to claim 5, the aforementioned combined teaching fails to explicitly disclose the adaptive channel selection base on predetermined parameters. The Wagner et al. reference teaches the adaptive channel selection base on predetermined parameters, where the predetermined parameter is bandwidth so as to provide a higher information transfer rate. "Multiple channels on broadcast link 6 are available for the transmission of data packets to clients 2. The channels on which clients 2 receive data packets are switched in order to maximize the available VBI lines in all of the channels.

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In other words, client 2 does not always receive data on the same VBI lines in the same channel. Both the VBI lines and the channel are switched. The switching may take place from data message (i.e., a multiplicity of data packets which together form a single message) to data message or during the transmission of a single data message. Channel and VBI line switching is controlled by commands from distributor 5" (Col 7, Line 35-45). "The selection of channel and line for data is determined by a technique queue management and based upon the availability of bandwidth, the priority of the data, average client waiting time, size of the data, and the type of transaction" (Col 7, Lines 57-60). Consequently, it would have been clearly obvious to one of ordinary skill in the art to implement the combined teaching with the adaptive channel selection base on predetermined parameters, where the predetermined parameter is bandwidth so as to provide a higher information transfer rate.

In regard to claim 6, the Wagner et al. reference discloses the monitoring of channel bandwidth so as to "decide" between channels. "Multiple channels on broadcast link 6 are available for the transmission of data packets to clients 2. The channels on which clients 2 receive data packets are switched in order to maximize the available VBI lines in all of the channels. In other words, client 2 does not always receive data on the same VBI lines in the same channel. Both the VBI lines and the channel are switched. The switching may take place from data message (i.e., a multiplicity of data packets which together form a single message) to data message or during the transmission of a single data message. Channel and VBI line switching is controlled by commands from distributor 5" (Col 7, Line 35-45). "The selection of

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channel and line for data is determined by a technique queue management and based upon the availability of bandwidth, the priority of the data, average client waiting time, size of the data, and the type of transaction" (Col 7, Lines 57-60).

6. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Banker et al. (US Pat No 5,247,364) in view of Bacon et al. (US Pat No 5,440,632) and in further Wagner et al. (US Pat No 5,761,602).

In regard to claims 8, the aforementioned combined teaching fails to explicitly disclose adaptively setting the download flag. The Wagner reference teaches the adaptive channel selection base on predetermined parameters, where the predetermined parameter is bandwidth so as to provide a higher information transfer rate. "Multiple channels on broadcast link 6 are available for the transmission of data packets to clients 2. The channels on which clients 2 receive data packets are switched in order to maximize the available VBI lines in all of the channels. In other words, client 2 does not always receive data on the same VBI lines in the same channel. Both the VBI lines and the channel are switched. The switching may take place from data message (i.e., a multiplicity of data packets which together form a single message) to data message or during the transmission of a single data message. Channel and VBI line switching is controlled by commands from distributor 5" (Col 7, Line 35-45). "The selection of channel and line for data is determined by a technique queue management and based upon the availability of bandwidth, the priority of the data, average client waiting time, size of the data, and the type of transaction" (Col 7, Lines 57-60).

In regard to claim 9, the Wagner et al. reference discloses the monitoring of channel bandwidth so as to “decide” between channels. “Multiple channels on broadcast link 6 are available for the transmission of data packets to clients 2. The channels on which clients 2 receive data packets are switched in order to maximize the available VBI lines in all of the channels. In other words, client 2 does not always receive data on the same VBI lines in the same channel. Both the VBI lines and the channel are switched. The switching may take place from data message (i.e., a multiplicity of data packets which together form a single message) to data message or during the transmission of a single data message. Channel and VBI line switching is controlled by commands from distributor 5” (Col 7, Line 35-45). “The selection of channel and line for data is determined by a technique queue management and based upon the availability of bandwidth, the priority of the data, average client waiting time, size of the data, and the type of transaction” (Col 7, Lines 57-60).

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Banker et al. in view of Bacon et al. and in further view of the Newton’s Telecom Dictionary (ISBN # 1-57820-018-0, Page 179).

In regard to claim 10, the aforementioned combined teaching comprises RAM for storing downloaded code. “The in-band data, except for descrambling data, is stored in DRAM 137 for buffering” (Col 7, Lines 16-17). The combined teaching does not explicitly disclose a CRC check for verification purposes. The Newton’s Telecom Dictionary teaches the use of a CRC check for verification of the integrity of a block of data (Page 179, See definition of CRC). Consequently, it would have been clearly

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obvious to one of ordinary skill in the art to implement the combined teaching with a CRC check for verification purposes.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Manning whose telephone number is 571-272-7352. The examiner can normally be reached on M-F: 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on 571-272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JM
November 7, 2005



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